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4 Batting T Adapter  
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11 Related Applications  
12

13 This non provisional application is a continuation-in-part of  
14 provisional application 60/251,767, which was filed December 7,  
15 2000, entitled TURBO BASEBALL BATTING TEE ACCESSORY and is a  
16 continuation-in-part of utility patent application serial number  
17 10/006,025, filed on December 7, 2001, entitled Batting T  
18 Adapter, now abandoned.

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## Field of the Invention

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4 This invention relates to a unitary, insertable adapter for use  
5 with batting-t's which is translucent, flexible and designed to  
6 more faithfully reflect the mechanics of hitting a ball thrown  
7 through the air and will frictionally mate with most commonly  
8 known batting-t's.

## Background of the Invention

Batting-t's have been widely used and known for many years. They are often necessarily designed to be heavy and rugged in order to withstand the punishing treatment of being hit during use. A major drawback of heavily built commonly known rubber batting-t's is that hitting the heavy, rigid and usually rubber "pipe" holding the ball sends shockwaves back through the bat to the batter. This shockwave is physically and mentally detrimental to the batter who considers the implication of a low swing on all future attempts. This has the result of the batter worrying about being "shocked" by impact with the batting-t, instead of concentrating on hitting the ball. As a result, the batters start to alter their swing, and instead of hitting down and through the ball, they tend swing over the top of the ball.

Additionally, most batting-t's are black and do not replicate the action of hitting a ball in clear mid air. Since these batting-t's do not exactly mimic the reality of hitting a ball in mid air because of this visual difference, the utility of existing batting-t's as a training tool is diminished.

Existing batting-t's are often made of many discrete parts and will wear out or come apart after being struck by bats and the entire unit must be replaced at a large expense.

1 There are many patents covering batting-t's such as Becker, U.S.  
2 Patent 5,100,134 and Chorey, U.S. Patent 3,883,138. Chorey  
3 teaches a telescoping batting-t adapter that has a hollow base  
4 that is held in place within the batting-t's base by a  
5 thumbscrew. Since the batting-t adapter in Chorey will likely  
6 struck by fast moving baseball bats, it is likely to come lose  
7 and have to be reset to continue play.

8  
9 Becker teaches a uniform diameter solid post with a slidable lock  
10 ring, where the lower portion of the solid post below the  
11 slidable lock ring is placed in frictional engagement with the  
12 inner wall of the batting-t base pipe. A ball holder is screwed  
13 onto the top of the post in Becker. The batting-t in Becker is  
14 likely move vertically and/or have the ball holder come loose as  
15 baseball bats strike it. In Becker, the post will move vertically  
16 as it is struck by the bat due to the slidable nature of the  
17 friction grip and the continuous and unchanging diameter of the  
18 post.

19  
20 Batting-t's generally have a wide base and a vertical base pipe  
21 portion rigidly and perpendicularly attached to the wide base.  
22 The vertical base pipe portion is generally made of heavy rubber  
23 that is required to withstand repeated beating from baseball  
24 bats. Generally, a telescoping pipe is designed to be in slidable  
25 frictional engagement within the vertical base pipe portion of  
26 the batting-t. The telescoping pipe is usually hollow or solid.

1 The ball to be hit is placed on the top of the telescoping pipe  
2 section.

3

4 The internal diameter of the vertical base pipe and telescoping  
5 pipe of commonly known batting-t's will vary due to the  
6 difficulty of forming rubber to precise dimensions.

7

8 The instant invention is designed to frictionally and securely  
9 mate with the majority of commonly available batting-t's, both  
10 the vertical base pipe portion and the telescoping pipe through  
11 the use of exacting manufacturing standards and dimensions and  
12 from being manufactured from smooth, yet rigid and dense  
13 material. The instant invention is designed as a unitary article  
14 of manufacture and has a significant mass below the neck portion  
15 to ensure a stable base through a low center of gravity.

16 Additionally, a stepped locking surface design on the periphery  
17 of the lower base portion helps to lock the instant invention  
18 into most commonly known batting-t's. Not only will the instant  
19 invention not come apart in use, as is it a unitary article, it  
20 is designed to stay firmly situated with most commonly known  
21 batting-t's. Thus, the instant invention overcomes the critical  
22 design shortcomings of before known batting-t adapters.

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2                   Objects and Advantages of the Invention  
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4   An object of the instant invention is a quick and easy to install  
5   batting-t adapter which will mate with most commonly known  
6   batting-t's.

7  
8   Another object of the instant invention is a batting-t adapter  
9   that is flexible and translucent and is configured to reduce ball  
10   friction.

11  
12   Another object of the instant invention is a batting-t adapter  
13   that has a unitary construction and a low center of gravity to  
14   help it stay in place while in use.

15  
16   Another object of the instant invention is a batting-t adapter  
17   which is lightweight and durable, yet is also small and portable  
18   being made from strong, dense PVC with a smooth, low friction  
19   surface to prevent excessive wear from use.

20  
21   Another object of the instant invention is a batting-t adapter  
22   that prolongs the life of existing and dilapidated batting-t's.

23  
24   Another object of the instant invention is a batting-t adapter  
25   designed to frictionally mate with most batting-t's through a  
26   stepped locking band below the circumferential ring portion of the  
27   batting-t adapter.

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Description of the Drawings

Figure 1 is a perspective view of the batting-t adapter in use inserted in a batting-t.  
Figure 2 is a side sectional view of the batting-t adapter.  
Figure 3 is a side elevational view engineering drawing with dimensions shown thereon.

Detailed Description of the Preferred Embodiment

Detailed embodiments of the instant invention are disclosed herein, however it will be understood that the disclosed embodiments are exemplary of the invention, which may be embodied in various forms. Therefore, specific structural and functional details disclosed herein are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one skilled in the art to variously employ the present invention in virtually any appropriately detailed structure.

Referring to Figure 1, the batting-t adapter 2 is shown frictionally disposed in the upper telescoping vertical tube 40 of commonly known batting-t 54. Upper telescoping vertical tube 40 is in turn in frictional engagement with vertical base pipe portion 42, which is in turn is attached to batting-t base 52.

Referring to Figure 2 batting-t adapter 2 has a lower base 4 which has solid core 6, outside wall 12, lower end 8 and lower outer edge 10, a top end 56. Lower base 4 has an upper neck 50 that has a wider diameter than the diameter of lower base narrow section 58 of lower end 8. Solid and dense core 6 of base 4 helps to keep batting-t adapter 2 solidly supported in telescoping vertical tube 40 of commonly known batting-t's 54.



1 Most commonly known batting-t's have one of two hollow  
2 telescoping vertical tube 40 internal diameters. The more  
3 expensive brands usually have a slightly larger telescoping  
4 vertical tube 40 internal diameter of between 1.18 at 1.20  
5 inches. The less expensive brands usually have a slightly smaller  
6 telescoping vertical tube 40 internal diameter of between 1.15 to  
7 1.16 inches. Additionally, since commonly known batting-t's are  
8 built from rubber, they have some inherent flexibility and are  
9 seldom manufactured to precise manufacturing specifications.

11 The external diameter of solid core 6 of lower base 4 is  
12 preferably 1.165 inches, with a manufacturing tolerance of 0.01  
13 inches. Solid core 6 of lower base 4 is preferably 6.5 inches in  
14 length.

16 The external diameter of upper neck 50 of lower base 4 is  
17 preferably 1.23 inches, with a manufacturing tolerance of 0.01  
18 inches and is preferably 0.5 inches in length and is disposed  
19 between lower base 4 and circumfrential stop ring 16.

21 When lower base 4 is inserted into telescoping vertical tube 40  
22 with a smaller periscope internal diameter, lower base 4 fits  
23 very snugly within the smaller telescoping vertical tube 40  
24 opening and will tightly frictionally engage the inside wall of  
25 telescoping vertical tube 40 and will slightly stretch the  
26 diameter of telescoping vertical tube 40. Further, when the  
27 upper neck 50 of lower base 4 is inserted into the small diameter

1 telescoping vertical tube 40, the telescoping vertical tube's 40  
2 diameter will be exceeded by 0.08 inches which further makes for  
3 a very tight fit, while the slightly narrower diameter of the  
4 solid core 6 of lower base 4 makes for easier insertion and  
5 removal of batting-t adapter 2 from telescoping vertical tube 40.

6  
7 With respect to batting-t's having a larger diameter telescoping  
8 vertical tube 40 openings, the solid core 6 of lower base 4 fits  
9 firmly into the telescoping vertical tube 40, with the neck 50 of  
10 lower base 4 exceeding the diameter of telescoping vertical tube  
11 40 by 0.03 inches. This level of frictional engagement, along  
12 with the mass and weight of the seven inch insertion of solid  
13 core 6 of lower base 4, creating a low center of gravity, and the  
14 unitary construction of batting-t adapter 2, have been found to  
15 keep the batting-t adapter 2 properly situated in the telescoping  
16 vertical tube 40 during actual and heavy use thereby being able  
17 to withstand repeated bat stikes and normal side load forces.

18  
19 Tight manufacturing tolerances, combined with the unitary  
20 construction of the batting-t adapter 2, are far superior to the  
21 functionality of prior known batting-t adapters having multiple  
22 parts and non tightly controlled structural tolerances. To meet  
23 these tight engineering tolerances requires the manufacturing  
24 mold to be formed from a Nitronic, or similar, stainless steel  
25 alloy material.

26

1 Circumfrential stop ring 16 is located at the opposite end of  
2 lower base 4 from lower end 8. Circumfrential stop ring 16 has a  
3 lower neck 14, an upper neck 18 and stop ring extending arm  
4 portion 44. When in use, lower neck 14 of circumstantial stop  
5 ring 16 is supported by telescoping vertical tube 40 of commonly  
6 known batting-t's 54.

7  
8 The batting-t adapter 2 base will additionally frictionally mate  
9 with vertical base pipe portion 42 of commonly known batting-t's  
10 54 due to the 1.70" diameter of circumstantial stop ring 16.

11 The wide diameter of Circumstantial stop ring 16 allows players,  
12 coaches and parents to completely remove telescoping vertical  
13 tube 40 from vertical base pipe portion 42 and just only use  
14 batting-t adapter 2 supported by vertical base pipe portion 42.

15 This is preferred for younger, smaller players, including t-ball  
16 leagues and five and six year olds, or any player who wants a  
17 very low assimilated pitch. Vertical base pipe portion 42 of  
18 commonly known batting-t's are usually heavy and thick and  
19 players and coaches will seldom hit a ball off vertical base pipe  
20 portion 42. If the player were to do this, he/she would risk  
21 damaging the batting tee and would risk injury to his/her hands  
22 and/or wrists from receiving a shockwave from hitting vertical  
23 base pipe portion 42 with the bat due to the substantial heavy  
24 mass of vertical base pipe portion 42. With the lighter and  
25 pliable batting-t adapter 2 placed in the vertical base pipe  
26 portion 42 players can safely train at a desired lower setting,  
27 without risking injury or damage to the equipment.

1  
2 Circumferential stop ring 16 should have a thickness of  
3 approximately 0.25 inches to be thick enough to firmly support  
4 the batting-t adapter 2 within the telescoping vertical tube 40  
5 or within vertical base pipe portion 42 of commonly known  
6 batting-t's 54.

7  
8 Upper support portion 22 of batting-t adapter 2 is integrally  
9 connected to lower base 4. Depending on the need for height and  
10 rigidity, upper base portion 20 may be integrally disposed  
11 between lower base 4 and upper support portion 22. Upper base  
12 portion 20 may be configured with the same, narrower or wider  
13 dimension as compared to lower base 4. Upper base portion may  
14 preferably be 1.0 inches in length.

15  
16 Upper support portion 22 has internal aperture 24, internal walls  
17 26, outer wall 28 and internal bottom 30.

18  
19 Flared tip portion 32 is connected to the top of upper support  
20 portion 22. Flared tip portion 32 has internal aperture 34,  
21 internal wall 36, outer wall 38 and outer edge 48.  
22  
23

24 As shown in Figure 1, in operation, ball 46 is placed on outer  
25 edge 48 of flared tip 32. Ball 46 is held in position in order  
26 for a batter to hit ball 46 from a position resting on outer edge  
27 48 of batting-t adapter 2.  
28

1 Batting-t adapter 2 is made from translucent, flexible PVC or  
2 similar material in order to simulate hitting a ball suspended in  
3 air. The translucence helps to isolate the ball 46 from commonly  
4 known batting-t's 54. When in use, lower neck 14 of  
5 circumstantial stop ring 16 is supported by telescoping vertical  
6 tube 40 of commonly known batting-t 54. The material which forms  
7 batting-t adapter 2 is flexible to avoid contact pressure being  
8 transferred back to the batter as a result of contact made with  
9 batting-t adapter 2.

10  
11 In the preferred embodiment, batting-t adapter 2 is made from PVC  
12 material that should have a toughness and density to be able to  
13 withstand at least 2,500 contacts of a bat without any indication  
14 of breakdown. Since the batting-t adapter 2 is easily  
15 replaceable, it makes old and dilapidated commonly known batting-  
16 t's 54, which have a frayed or split telescoping vertical tube  
17 40, completely functional. Additionally, batting-t adapter 2 will  
18 extend the life of most commonly known batting-t's 54 by  
19 absorbing the majority of impact hits.

20  
21 Upper support portion 22 of batting-t adapter 2 should be about 3  
22 inches in length and upper flared portion 32 of batting-t adapter  
23 should be about 1.5 inches in length. The flared tip outer wall  
24 38 should be about 0.25 inches in thickness to be relatively  
25 thin, yet rugged and resilient to being struck by bats. The  
26 flared tip outer wall 38 has a rounded outer edge and a maximum

1 aperture diameter of about 1.25 inches to keep ball friction to a  
2 minimum.

3

4 Batting-t adapter 2 is designed to be lightweight to be easily  
5 carried in travel bags to be installed in telescoping vertical  
6 tubes 40 or vertical base pipe portions 40 of commonly known  
7 batting-t's 54 in seconds, without tools and to remain in place  
8 in active use.

9

10 Additional features and applications of the instant invention can  
11 be practiced hereunder without departing from the nature and  
12 spirit of the description of the preferred embodiment.

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